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ABSTRACT

One of a set of seven competency-based instructional materials (six learning modules and one user's guide) designed for the inservice training and improvement of local level vocational education administrators, this user's guide provides directions for persons supervising the use of learning modules and is directed toward helping the user become familiar with the modules. Content is presented in six chapters. Chapter 1, Overview, is a general discussion of the meaning of competency-based administrator education (CBAE), including how it differs from a traditional program and the need for CBAE materials. Chapters 2 through 4 discuss the modules in terms of the development process, format, and objectives (for each module). A noted feature of the modules' format is the opportunity provided for exemption testing, which allows the learner to make decisions and to self-pace, and also serves as a learner diagnostic tool. Chapter 5 discusses five curricular arrangements that are appropriate settings for using the CBAE materials: preservice (on-campus), preservice (on-campus) internship, inservice (off-campus) combined with internship or externship, externship, and competency-based arrangement. The final chapter discusses student orientation to CBAE. A rank order of administrator competencies and examples of how CBAE modules might be selected for an inservice program are appended. (SH)

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USER'S GUIDE FOR COMPETENCY-BASED ADMINISTRATOR EDUCATION MATERIALS

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PREFACE

The purpose of the user's guide is to provide direction for persons supervising the utilization of competency-based administrator education modules for local vocational administrators. These persons include university faculty providing pre-service and in-service vocational administrator instruction as well as supervisors, staff development directors, and program administrators.

Content included in this guide is directed toward helping the user become familiar with materials developed by the Competency-Based Administrator Education Project, Division of Vocational and Technical Education, Virginia Polytechnic Institute and State University. Persons desiring further information about competency-based education are advised to read the module titled "Implementing Competency-Based Instruction in Vocational Education" which was developed as a part of this project.

TABLE OF CONTENTS

		Page
	Preface	ii
I.	OVERVIEW	1
	Competency-Based Administrator Education	1
	The Need for Competency-Based Administrator Education Materials	2
II.	MODULE DEVELOPMENT PROCESS	6
III.	MODULE FORMAT	9
IV.	MODULE DESCRIPTIONS	12
V.	USING COMPETENCY-BASED MATERIALS	17
VI.	STUDENT ORIENTATION TO COMPETENCY-BASED ADMINISTRATOR EDUCATION	25
	References	27
	Appendix A: Rank Order of Administrators' Perceived Needs for In-Service Training	A1
	Appendix B: Other Competencies Identified as Being Important to Vocational Education Administrators	B1
	Appendix C: Example of How Modules Might be Selected for a CBAE In-Service Program	C1

I. OVERVIEW

Any person who intends to use competency-based administrator education (CBAE) materials should have some familiarity with this general area. Since a thorough discussion of competency-based education is provided in a module developed as part of the CBAE project, information of this sort is not presented here. Initially the discussion in this section focuses on concepts which underly competency-based administrator education. This is followed by an explanation of the need for competency-based administrator education materials.

Competency-Based Administrator Education

Competency-based administrator education (CBAE) refers to instruction which focuses on developing and/or improving skills, attitudes, values, and appreciations, which will facilitate administrator achievement of specified competencies in administration. In CBAE, competencies to be demonstrated by administrators are derived from criterion referenced concepts of administrator roles and are stated in such a way that the competency may be assessed.

The criteria employed in assessing the administrator are based upon specified competencies, including explicitly stated levels of mastery under specified conditions. Both the competencies and their evaluative criteria are made known to the student in advance.

Actual assessment of the administrator's competence uses performance as evidence of competence. The administrator's knowledge is taken into account as it relates to performance, thereby enabling the individual to demonstrate application of knowledge in realistic settings.

Rate of progress through the CBAE program is not determined by a specified time for course completion, but by the student's satisfactory

demonstration of the specified competence. Depending upon prior knowledge of the competency under consideration, the student may or may not need to complete all learning experiences relating to that particular competency. If the student feels proficient, he or she may choose to complete the final assessment without completing the other learning experiences. Final assessment of the student's competence is based only on a demonstrated mastery of the specified competency.

A detailed comparison of a CBAE Program and a traditional program is provided in Figure 1. This figure points up the unique characteristics of CBAE and how these characteristics differ from a "typical" traditional administrator preparation program. In a traditional program competencies to be demonstrated by the administrator are seldom made public in advance. The criteria employed in assessing competencies are based on general objectives and are usually not made public. CBAE programs are explicit in stating levels of mastery, and the conditions under which they will be performed.

The Need for CBAE Materials

Attempts to operationalize competency-based education for vocational education students are multiplying as the national movement gains momentum. Efforts are likewise being made to reform professional education for vocational educators to better relate to the real world of professional performance.

Competency-based teacher education (CBTE) is a concept that has developed over a number of years. The growth of CBTE for vocational teachers has paralleled that of general education. Many current CBTE efforts in various states are partly based on 384 competencies identified by Cotrell and others (1972). In many cases, competencies were

FIGURE 1

Comparison of Traditional and Competency-Based Administrator Education

Characteristics	Traditional Program	CBAE Program
1. Competencies to be demonstrated by the administrator are:	·derived from committee consensus ·stated in general terms ·seldom made public	·derived from explicit concepts of administrator roles ·stated so that competence may be assessed ·made public in advance
2. Criteria to be employed in assessing competencies are:	·based upon general program objectives ·general in stating mastery levels ·seldom made public	·based upon specified competencies ·explicit in stating levels of mastery under specified conditions ·made public in advance
3. Assessment of the administrator's competency:	·uses course grades as evidence of competence may include performance as well as knowledge ·may focus on objectivity	·uses performance as evidence of competence ·takes administrator knowledge into account as it relates to performance ·strives for objectivity
4. Rate of progress through program is determined by:	·time of course completion	·demonstrated competency
5. Instructional program is intended to:	·facilitate administrator achievement of certain general program objectives	·facilitate administrator achievement of specified competencies

verified at state and regional levels and then programs devised which built upon those competencies. Several vocational teacher education departments have implemented CBTE (e.g., Temple University, University of Nebraska, Wayne State University, University of Minnesota).

Concurrent with demands to improve vocational education and vocational teacher education has been the need for competent leadership personnel to administer expanded services at the local vocational education level. Considerations of expediency in meeting these needs have resulted in frequent promoting "from the ranks." Additionally, more sophisticated leadership is required of incumbents.

In a rapidly changing world, vocational leadership must be forward looking and dynamic, and be able to adapt thinking to the constantly changing situation which it faces. Capable leadership is frequently in short supply, especially at the local level, and it is leadership at this level which has a major impact on the delivery of vocational education programs.

Capable leadership in the administration of local vocational programs is even more important today than it has been in the past. Vocational education must not operate in isolation. It must be an integral part of the complex and rapidly changing educational system that adapts to the economic, social, and political forces of the community served.

The instructional materials from this project focus on further professional development through in-service education for incumbents and newly approved directors of vocational education, principals of area vocational high schools, and supervisors of vocational education. Priority areas for in-service training were determined by examining professional competencies which a select panel of local vocational

administrators and school superintendents indicated as being most important and most needed (see Section II). Following a module format (see Section III), prototype training materials were developed in six key areas (see Section IV).

II. MODULE DEVELOPMENT PROCESS[1]

Competencies which serve as a basis for the CBAE modules were identified by means of a vocational education administrator needs assessment. The instrument used to assess these needs consisted of a listing of eighty-seven potential competencies identified through a variety of sources. One source of potential competencies consisted of job descriptions for vocational education administrators. These job descriptions detailed general duties of administrators and provided basic information about the kinds of performance currently required of those assuming responsibilities as vocational education administrators. Another source employed was information from discussions held with state Division of Vocational Education staff, the Executive Director of the Virginia Advisory Council on Vocational Education, selected school superintendents and vocational administrators in Virginia. Through these discussions, more specific details about competencies were obtained.

Current research studies constituted a third source of references. Relevant information obtained from these studies was incorporated in planning the needs assessment in an effort to keep abreast of recent trends in the field. The design of the needs assessment instrument gave participants an opportunity to judge the importance of each potential competency as well as an opportunity to indicate the perceived need for in-service training. This was accomplished by presenting the participant with a listing of items or statements which could relate to the administration of local vocational programs. Two sets of scales

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[1]Further details about the module development process are provided in Finch, Curtis R. Developing Competency-Based Training Materials to Meet the In-Service Needs of Local Vocational Administrators, Final Report. Blacksburg: Virginia Polytechnic Institute and State University, March, 1977.

were included with each item. One set of scales was used to judge the importance of the item to the jobs of vocational education administrators. The other set was used to determine how each participant perceived the vocational education administrator's need for in-service training to improve upon his or her ability to perform the item. Spaces were included at the end of the form to allow for omissions in the list of items. A summary of the rank order of competency areas classified by local vocational administrators and school superintendents as being high priority in-service needs are presented in Appendix A. Other competencies considered important to vocational education administrators are presented in Appendix B.

Concurrent with needs assessment activities, searches were conducted to identify existing resources which could be used to meet in-service needs of local administrators. Resources that had potential to help meet in-service needs were obtained. Professional tasks which the local administrators and school superintendents indicated as being most important and most needed were considered to be high priority areas for in-service training. After this determination was made, identified resources were reviewed to ascertain which of them could be used to develop which competencies (important tasks). This procedure insured that project staff would utilize existing resources as much as possible and not duplicate work which has already been done elsewhere.

Seven of the highest priority areas deemed important to and most needed by practicing vocational education administrators were chosen for instructional material development. Six prototype modules for these priority areas were then developed by the project staff in conjunction with local vocational administrators and university faculty involved

in the preparation of vocational administrators with two of the seven competencies being combined into one module.

Each of the six modules was pilot tested with students in at least one instructional setting. The purpose of this testing was to determine to what extent:

1. students mastered package objectives.
2. students perceived each package as being an effective teaching/learning device.
3. university faculty presenting each package perceived it to be an effective teaching/learning device.

Students' and faculty members' perceptions of package effectiveness were assessed via self-report instruments and student mastery of instructional objectives evaluated by a performance assessment form included in each package. It should be noted that, because of time and budget constraints, modules could not be experimentally tested in order to compare student performance on the modules with performance on other approaches to learning.

In order to further ensure that packages were acceptable, a third-party evaluation was conducted. Based on testing and the third-party evaluation, packages were further revised, reproduced, and distributed to the general public.

III. MODULE FORMAT

In contrast with traditional instructional arrangements the modular approach utilizes the module as a basic instructional building block instead of arranging content around a subject, unit, or lesson (Finch and Crunkilton, 1978). Essentially, a module may be defined as a self-contained package that includes a planned series of learning experiences designed to help the student master specified objectives (Kapfer and Kapfer, 1973; Goldschmidt and Goldschmidt, 1972; Russell, 1974).

There are a variety of formats for modules; however, any useful format must move the learner logically and sequentially through a series of experiences that will enable him or her to meet specified behavioral objectives. The module format used for the competency-based administrator education materials consists of several components which are presented below and described in the paragraphs which follow:

- Cover Page
- Introduction
- Module Structure and Use
  - Organization
  - Objectives
  - Procedure
  - Resources
  - Terminology
- Learning Experiences
  - Enabling Objective
  - Information Sheet
  - Self-Check
  - Model Answers
- Module Assessment
- Performance Assessment Sheet

The purpose of the cover page is to communicate and attract the attention of the learner. This is accomplished through the use of a title which communicates active learning and represents a perceived area of need of vocational education administrators for in-service training. A second part of the cover page is a table of contents which

serves as an advance organizer for the total module. It adds to the learner's ability to quickly locate specific parts of the module.

The introduction follows the cover page and is intended to explain why the material presented is important for the learner to know. It creates interest and stimulates thinking in a certain direction. The introduction encourages the reader to set goals and helps establish basic assumptions about the content covered in the module.

A third component of the module is that of module structure and use. This component includes several sections beginning with a section on the organization of the module. The next section covers the performance objectives which specify learner outcomes, identify the conditions under which the performance should occur, and establishes assessment standards. Both the terminal and enabling objectives are included in each module. Enabling objectives are designed to help the learner achieve the terminal objective and are placed as headings for the learning experience sections. Other sections include the procedures to follow, resources to use, and specific terminology.

The learning experiences provide activities for the module and aid the learner in accomplishing performance objectives. Each learning experience is presented on blue paper for easy access and is followed by an information sheet which develops content, self-check and model answer sections to serve as feedback devices for the learner. The final learning experience in each module is designed to allow application of learning in an applied setting.

Each module concludes with two components presented on yellow paper which include the module assessment and administrator performance

assessment forms. These test the exit competence of the learner and can be used to indicate certain competency voids.

An important feature of the module format is the opportunity provided for exemption testing. Students may demonstrate competence of an enabling objective by completing the appropriate self-check section(s), then may proceed to the next learning experience or may elect to totally skip all of the module by successfully completing the final module assessment form. This exemption testing feature helps the learner make decisions, allows the learner to self-pace, and serves as a learner diagnostic tool.

IV. MODULE DESCRIPTIONS

The six modules produced as a part of this curriculum development effort include Motivating Vocational Education Personnel to Their Optimum Growth Potential, Implementing Competency-Based Instruction in Vocational Education, Planning Vocational Education Programs for the Disadvantaged and Handicapped, Formulating Goals and Objectives for Vocational Education Programs, Organizing and Conducting Staff Development Activities for Vocational Teachers, and Preparing Local Plans for Administering Vocational Education. Each of these modules is described briefly below.

Motivating Vocational Education Personnel to Their Optimum Growth Potential

The learning experiences in this module are designed to acquaint the student with the basic underlying theories of motivation and to provide insight into various methods of applying these theories to motivate school personnel. Four objectives comprise the learning package:

Terminal Objective: In a real or simulated school situation (e.g., area vocational school or comprehensive high school) develop a written plan for motivating personnel. This plan will include office personnel and teachers from all service areas.

Enabling Objective #1: Demonstrate knowledge and understanding of theories for human motivation which are useful for managers, administrators, and supervisors who operate within the formal organization.

Enabling Objective #2: Identify methods which could be considered by administrators for improving motivation among personnel.

Enabling Objective #3: Based on a case study situation, prepare a written analysis by explaining what motivational factors existed, the primary problems presented by the situation, causes of the problems, and corrective measures which could

have been taken to prevent the problems. Use your knowledge of motivational theory and methodology as a guide in preparing your analysis.

Pilot test results indicated a range of completion time of 5 hours to 12 hours with a mean of 9.6 hours.

Implementing Competency-Based Instruction in Vocational Education

The learning experiences in this module are designed to help the learner develop skills in implementing CBI. The learner is provided an opportunity to develop expertise in areas such as orienting teachers to their new roles in competency-based instruction and developing CBI implementation plans. The module includes five objectives:

Terminal Objective: Plan strategies to implement instruction which focuses directly on developing those tasks, skills, attitudes, values, and appreciations that are deemed critical for successful employment (competency-based instruction).

Enabling Objective #1: Demonstrate knowledge of the rationale for implementing competency-based instruction in vocational-technical schools.

Enabling Objective #2: Identify administrative concerns in implementing competency-based instruction in vocational-technical education.

Enabling Objective #3: Demonstrate knowledge of the procedure used to identify occupational objectives; the various ways teachers can use the occupational objectives; and implications for administration, such as course credit and graduation credit, and occupational certification.

Enabling Objective #4: Prepare a written plan for implementing key aspects of competency-based instruction (CBI) in a vocational program.

Student time to complete this module during the pilot testing process ranged from 6 hours to 25 hours with a mean completion time of 15.8 hours.

Planning Programs for Disadvantaged and Handicapped Students

Procedures for planning and implementing vocational programs for disadvantaged and handicapped persons are covered by asking the learner to accomplish seven objectives:

Terminal Objective: Based upon a real or simulated situation, develop a written plan for a vocational program to serve disadvantaged and/or handicapped students.

Enabling Objective #1: Demonstrate an understanding of federal legislation and funding sources related to handicapped and disadvantaged students in vocational education.

Enabling Objective #2: Determine the need for vocational programs that serve local disadvantaged student populations (i.e., characteristics of the population; employment opportunities; social, psychological, and legal considerations; etc.).

Enabling Objective #3: Determine the need for vocational programs that serve local handicapped student populations (i.e., characteristics of the population; employment opportunities; social, psychological, and legal considerations; etc.).

Enabling Objective #4: Establish policies and procedures which facilitate offering vocational education and related services to disadvantaged and handicapped students.

Enabling Objective #5: Determine resource requirements for providing instruction to disadvantaged and handicapped students (i.e., facilities, equipment, materials, and support personnel, etc.).

Enabling Objective #6: Develop a timetable for implementing programs and services for special needs students.

Student time to complete this module during the pilot testing process ranged from 2 hours to 16 hours with a mean completion time of 6.7 hours.

Formulating Goals and Objectives for Vocational Education Programs

Content of this module focuses on assisting the vocational administrator in becoming involved in that phase of goal development which aligns state and national educational standards with local concerns.

The process of goal development is the basis for the seven module objectives:

Terminal Objective: Facilitate the development of program goals, instructional objectives, and criterion measures for vocational education programs.

Enabling Objective #1: Identify outside resources (i.e., community occupational competencies and entry standards, community needs assessment, advisory committee, consultants, brochures, and course outlines from other schools) needed to develop program goals and objectives to support desired program outcomes.

Enabling Objective #2: Demonstrate knowledge of educational standards for vocational school programs (i.e., Standards of Quality and State Plan for Vocational Education) and concerns for facilitating development of goals and objectives for vocational programs.

Enabling Objective #3: In writing, explain strategies for involving staff in the development of goals and objectives. Take into account unique characteristics of subgroups.

Enabling Objective #4: Determine whether goals and objectives meet State Department requirements for a program and identify any required areas where goals and objectives appear deficient.

Enabling Objective #5: Determine the alignment of goals and objectives revised in Learning Experience IV with local concerns compiled from a community occupational survey, advisory committee minutes, and a consultant's report. Include instructions for revision of the goals and objectives by the appropriate vocational teachers.

Enabling Objective #6: Analyze appropriate kinds of criterion measures to be used by staff in evaluating achievement of given sets of program goals and instructional objectives.

Student time to complete this module during the pilot testing process ranged from 6 hours to 10 hours with a mean completion time of 8.2 hours.

Organizing and Conducting Staff Development Activities for Vocational Teachers

The learning experiences included in this module are designed to assist the vocational leader in developing or reacquiring the necessary skills to administer a quality staff development program. Emphasis is

placed on four skills related to meeting teachers' in-service needs: identification, organization, program implementation, and program evaluation. The module contains four objectives:

Terminal Objective: Prepare a staff development plan for the vocational staff of your school division.

Enabling Objective #1: Demonstrate knowledge of the administrator's role in staff development.

Enabling Objective #2: Develop a needs assessment and implementation strategy which will identify, prioritize, and then satisfy staff in-service requirements.

Enabling Objective #3: Develop a strategy for evaluating the extent to which staff development needs have been met.

Student time to complete this module during the pilot testing process ranged from 1 hour to 5 hours with a mean completion time of 3.1 hours.

Preparing Local Plans for Administering Vocational Education Programs

Program planning is the focus of this module. Both state and local level planning processes are reviewed to help the learner improve skills in this area. This module includes four objectives:

Terminal Objective: Given a set of hypothetical demographic data on vocational education at the state and local level, demonstrate your ability to develop a one-year plan for vocational education.

Enabling Objective #1: Demonstrate knowledge and understanding of the importance and need for planning local programs of vocational education.

Enabling Objective #2: Demonstrate knowledge and understanding of planning as a systematic process with ability to identify the major parts of a local plan and explain their functions.

Enabling Objective #3: Demonstrate the ability to criticize a local plan for vocational education.

Student time to complete this module during the pilot testing process ranged from 2 hours to 6 hours with a mean completion time of 3.9 hours.

V. USING THE MATERIALS

The actual way that competency-based administrator education (CBAE) materials might be used is dependent upon a variety of factors. These factors most typically consist of (but are not limited to) the types of students involved (i.e., pre-service vs. in-service administrators), the possible instructional locations (i.e., on-campus, off-campus or some combination thereof), and the capability of an institution to provide relevant experiences for students (e.g., externships, internships). These factors tend to affect the direction an institution will take in utilizing CBAE materials. Although the use of materials is limited only by available resources and faculty ingenuity, there appear to be at least five curricular arrangements that are appropriate settings for implementation. Each of these arrangements is detailed in the paragraphs which follow.

Pre-Service (On-Campus) Arrangement

The pre-service on-campus approach to preparing vocational administrators is well known and widely used. Typically, the aspiring administrator comes to campus full-time or part-time and takes graduate courses in vocational education administration and related areas. After completing requirements for administrator certification and an advanced degree, he or she seeks employment in the field.

While CBAE materials may certainly be used with an approach of this type, some of their potential is wasted because the student is not afforded an opportunity to apply module experiences in realistic educational settings while he or she is enrolled in school. This situation limits the value of materials since they are used in traditional academic

settings which sometimes excludes application in realistic school settings.

Pre-Service (On-Campus)/Internship Arrangement

When internship experiences are provided in conjunction with a pre-service, on-campus program, more complete use may be made of the CBAE materials. With this arrangement, students may complete portions of the modules that are most appropriate to the university setting and then complete the more applied learning experiences as administrator interns. An internship is basically an organized set of applied professional experiences provided in a work setting that is different from the person's past or present employment. Thus, the opportunity exists to select those real world experiences which are of greatest value to a particular individual. Modules may serve as basic sources of information while the student is in the university setting and then help direct applied study in the internship. Module learning experiences may also be useful for reviewing basic concepts when one is serving as an administrator intern. CBAE modules can be brought to the internship location and utilized as refresher materials when dealing with specific job situations.

In-Service (Off-Campus) Combined with Internship or Externship

A third arrangement is most appropriate for persons currently employed as vocational administrators, supervisors, and teachers. Offerings are provided at various off-campus locations so that individuals can receive professional development experiences on a part-time basis. CBAE materials are utilized in the various offerings with students completing module requirements by performing various activities in their own work settings. This is followed by an internship or externship (an organized set of applied professional experiences in one's current

place of employment). The flexibility of this arrangement allows the student to obtain those experiences which are most appropriate for professional development. In some instances, a teacher might not be able to receive relevant experiences through an externship arrangement and, therefore, can be scheduled into an internship. In other cases, where many vocational administrators are not able to leave their places of employment for extended time periods, the externship might be most appropriate. For either group, applied experiences serve to enhance the course work and insure that appropriate competencies are developed.

Externship

While the internship concept has been associated with the professions for some time, the idea of using an externship to develop vocational education leadership personnel is relatively new. Notable externship programs to prepare vocational education leaders have evolved over the past two decades in several states including Ohio, Michigan, New York, and Missouri. A most relevant application of the externship concept to preparing vocational leaders is described by Miller (1975). The Oregon State University model which was implemented in 1970 has enabled individuals to develop competence in leadership while still carrying major responsibilities in a local school district. Field-based seminars serve as a catalyst for participant development while provisions for meeting both group and individual objectives enables both personal and local education agency goals to be met. Since the Oregon State model has been instituted, similar externship programs have been initiated in Arkansas, Tennessee, and Nova University in Florida. Conceptually and from a practical standpoint, the extern model lends itself quite well to the use of CBAE materials. Program participants establish individual

objectives and then work toward meeting those objectives at locations remote from the university. Using modules in this setting enables the student to proceed at his or her own rate and have access to faculty members at periodic intervals when group seminars are held. Modules to be used by a student may be selected on the basis of his or her particular work setting and personal needs. In this manner, students need only to complete modules which have direct relevance to their current and anticipated areas of employment.

Competency-Based Arrangement

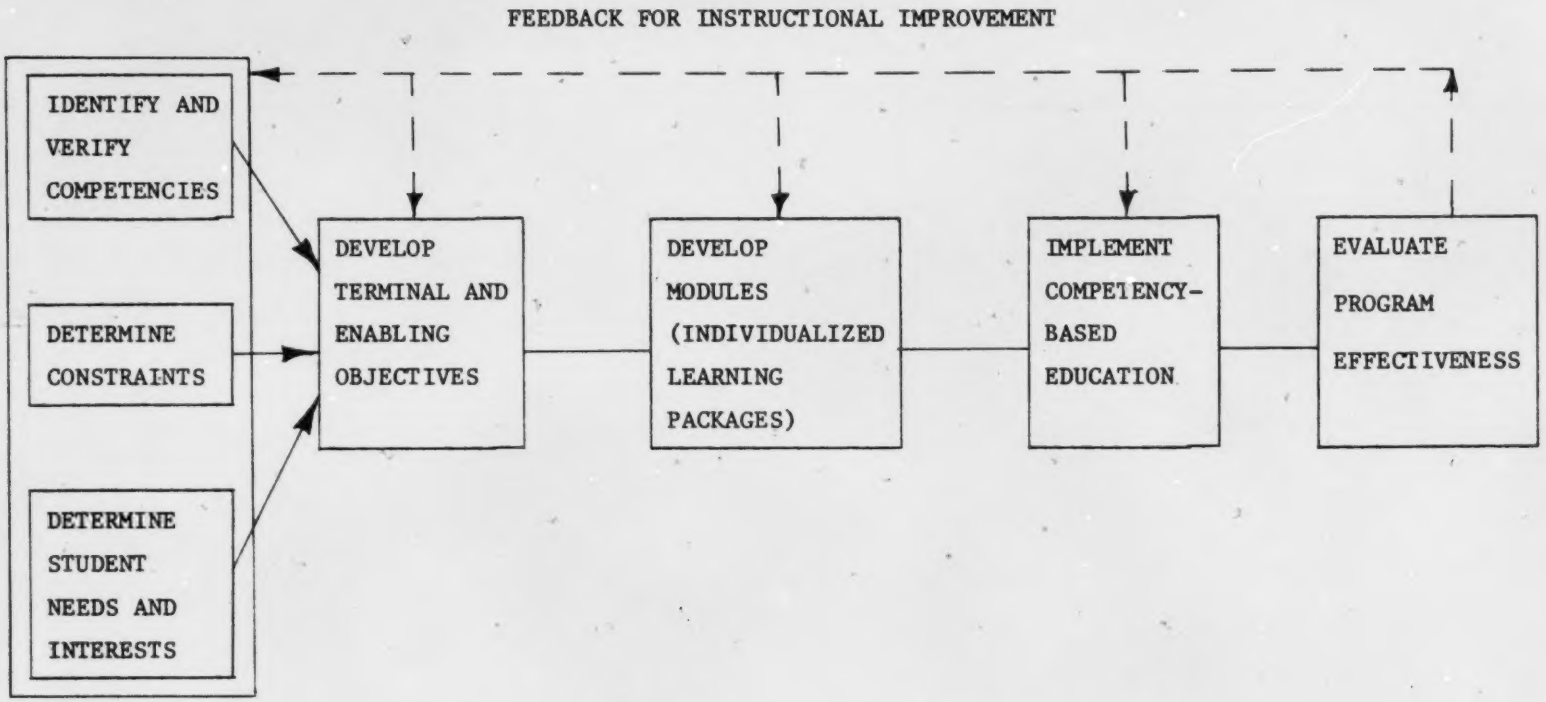
The foregoing arrangements have placed emphasis on the use of CBAE materials in existing educational environments. While this may be an expeditious way to implement CBAE materials and improve leader competencies, it may be desired to establish a totally competency-based program. One must keep in mind that establishing a competency-based program necessitates a basic shift in structure and content. This shift should, in turn, make instruction more relevant and program graduates more competent administrators.

Off-campus, on-campus, internship, and externship arrangements may be used in a competency-based program. Faculty are encouraged to use any arrangement which will help students to develop the specified competencies. Individualized and group instruction, role playing, and simulation are frequently found in competency-based programs and likewise may contribute to the development of vocational education leaders.

How then can a CBAE program be implemented? Figure 2 provides a graphic display of one procedure for a faculty to follow. Initially, competencies needed by the vocational administrator are identified. Since this task has already been completed as a part of the CBAE project,

FIGURE 2

IMPLEMENTING COMPETENCY-BASED EDUCATION



competencies are readily available for use in program development. The competencies needed by local vocational administrators are contained in Appendixes A and B. These seventy-five competencies serve as a foundation for the CBAE program and represent the perceptions of local vocational administrators and their respective superintendents of schools. The twenty-nine statements in Appendix A are those competencies needed by incumbent vocational administrators. They represent in-service needs as contrasted with pre-service needs (Appendixes A and B).

At this point, constraints as well as students' needs and interests are identified. Constraints consist of available dollars, facilities, and personnel. Each of these affect the program arrangement (e.g., on-campus vs. off-campus) and the development of competency-based materials. Student needs and interests are considered so that the program will be directed toward assisting students as individuals in developing necessary competencies. One student may be a local vocational administrator who desires in-service assistance while another may be a teacher who is pursuing administrator credentials on campus or on a full-time basis. Each student has varied but valid needs and interests which the CBAE program should attempt to meet.

Once competencies, constraints, and needs have been identified, objectives are developed for competencies which are needed by students and can be taught (given the existing set of program constraints). Both terminal and enabling objectives are established. Each terminal objective focuses directly on a specific competency or set of competencies so that a student's terminal performance parallels that which is required of the administrator in the worker role. Enabling objectives are then developed which facilitate the mastery of each terminal objective. Examples of these objectives are provided in Section IV.

After objectives have been prepared, consideration is given to the development of modules for use in individualized learning environments. The six modules described in this guide serve as examples of how instruction can be "packaged" to meet student needs. Modules available through other sources should be used to help "round out" a CBAE program. This, in itself, will greatly reduce the need to develop materials. Appendix C provides an example of how modules from a variety of sources might be used to build a sound CBAE program. Note that the selection of modules is merely illustrative; faculty members should examine each potential module and determine if, in fact, it actually aligns with the stated competencies.

The CBAE implementation phase is similar to implementing other competency-based programs. A wealth of information has been written about how programs can be organized and numerous program descriptions in this area can be used to assist faculty with the task of getting a program started (e.g., Adamsky and Cotrell, 1975; Cook and Richey, 1975; Finch and Harris, 1976; Finch and Hamilton, 1975; Vogler, 1975). Before implementation takes place, plans must be prepared for dealing with several critical areas. These include the roles of faculty and students; interaction with various groups, institutions, and agencies; and instructional support. The roles of students and faculty will change as a CBAE program is implemented. Likewise, involvement with various certification agencies, internship sponsors, and state vocational administrator organizations are very important. The need for instructional support may greatly increase if multi-media materials are used. In each of the aforementioned areas, a need for detailed planning and coordination is

apparent. This represents a key to successful implementation and is one process which cannot be taken lightly.

Evaluation is the final aspect of the CBAE implementation. It serves a most useful function in determining whether or not the program has been successful. Since standards have already been established via competencies and objectives, evaluation efforts should be directed toward determining the degree to which students have met these standards. The dotted lines in Figure 2 represent the routes that evaluation results take to facilitate instructional improvement. Thus, evaluation becomes a continuous activity; one which occurs as the program functions rather than merely taking place at two or three year intervals to comply with some external requests or requirements.

VI. STUDENT ORIENTATION TO CBAE

Regardless of the way an instructor utilizes a module in his or her instruction, advanced planning and preparation are keys to program success. Information about students should be obtained in advance of material utilization so that illustrations and examples may be provided which enhance the learning process.

The instructor should conduct a planning session with students to provide information about CBAE and present a thorough overview of the modularized approach to instruction. It is recommended that instructors complete the module on Implementing Competency-Based Instruction in Vocational Education. Some will find this to be a review of familiar material. Others will gain new knowledge about CBAE and be better prepared to work with students. Since learners work through the modules individually, time will need to be scheduled to meet with learners on an individual basis and provide assistance with specific problems and concerns.

While each module is self-contained and can be used independently of others, it may be of benefit to explain how each relates to the other to build competence. Students are not required to read additional materials when using the modules; however, it is beneficial for each learner to become acquainted with other authorities on a particular topic. Optional resources can be provided for added in-depth involvement depending upon students' individual interests and concerns. These optional resources are in the form of books, articles, films, or resource person(s). Any professional educator responsible for guiding and helping the student plan an educational program could be considered as a

resource person. Examples of resource persons would include a vocational education administrator or college professor.

Careful study and preparation by the instructor is imperative. Occasionally, the instructor who is not competent in the area a module covers will be caught off guard by students' questions. In this respect it is best to be ready before modules are distributed rather than as they are being used by students.

In each module, opportunity is provided for the learner to demonstrate proficiency in one or more of the performance objectives. When a student successfully completes the appropriate module assessment activity he or she then goes to the next performance objective. Using this approach, the learner considers learning experiences in the order presented and can choose to omit part or all of a module if appropriate competencies are exhibited by way of module assessment activities. In addition, this approach helps the learner gain insight into the nature of his or her particular deficiencies in competency areas and suggests learning experiences for the student which will help to eliminate these deficiencies.

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APPENDIX A

RANK ORDER OF ADMINISTRATORS' PERCEIVED NEEDS FOR IN-SERVICE TRAINING

Rank No.	Grouped Mean		Competency
1	3.287	5.	Determine the best curriculum design and organization to achieve instructional goals.
2	3.213	54.	Develop annual and long-range plans which include pertinent objectives.
3	3.107	81.	Implement instruction which focuses directly on developing those tasks, skills, attitudes, values, and appreciations that are deemed critical for successful employment (competency-based instruction).
4	3.067	46.	Plan special education programs for disadvantaged and handicapped students.
5	3.047	19.	Help formulate goals for vocational education in the county and/or city district school.
6	3.020 (Tied)	10.	Organize workshops and other in-service activities for teachers.
6	3.020 (Tied)	11.	Conduct workshops and other in-service activities for teachers.
6	3.020 (Tied)	20.	Develop means for continuous evaluation of instructional programs.
7	3.012	58.	Motivate personnel to their optimum growth potential.
8	2.967	30.	Help determine objectives of specific vocational programs.
9	2.960	74.	Provide for teacher participation in the accountability process.
10	2.927	59.	Articulate the philosophy of vocational education with business and industry representatives.
11	2.913 (Tied)	1.	Help formulate policies upon which the vocational programs operate.
11	2.913 (Tied)	42.	Prepare fiscal budgets.

Rank No.	Grouped Mean		Competency
12	2.893	63.	Develop and maintain a laboratory safety program based on legal requirements and safety standards.
13	2.887	69.	Maintain overall responsibility for program evaluation.
14	2.880 (Tied)	7.	Evaluate teacher performance.
14	2.880 (Tied)	12.	Provide assistance in writing proposals for state and federal funding of projects and programs.
15	2.873 (Tied)	6.	Promote coordination and balance between vocational and general education programs.
15	2.873 (Tied)	45.	Help plan new instructional facilities.
16	2.860	67.	Keep teachers informed about legal restrictions on training students (e.g., child labor laws).
17	2.853	18.	Interpret financial and special needs of vocational education to the public.
18	2.840 (Tied)	38.	Organize the staff for effective counseling and guidance.
18	2.840 (Tied)	79.	Unite and stimulate subordinates and superiors toward achievement of vocational education goals.
19	2.833	87.	Utilize manpower projections and economic development data in the program planning and revision process.
20	2.807 (Tied)	21.	Involve lay groups in program planning and evalution.
20	2.807 (Tied)	65.	Provide for instructional and personal needs of special students.
20	2.807 (Tied)	66.	Assist teachers in adopting innovations.
21	2.793	31.	Involve teachers in the decision-making process.

APPENDIX B

OTHER COMPETENCIES IMPORTANT TO VOCATIONAL ADMINISTRATORS

3. Interpret vocational programs to parents and others in the community.

71. Provide vocational education opportunities for students from all backgrounds.

68. Articulate program offerings between vocational and feeder schools.

61. Establish and maintain rapport with faculty from various vocational service areas (i.e., Agriculture, Business, Home Economics, Health, Distributive, Trade and Industrial Education, etc.).

50. Determine equipment needed to carry on effective vocational programs.

80. Establish and maintain advisory committees.

53. Check for possible hazards to pupil safety.

51. Determine operating supplies needed to carry on effective vocational programs.

32. Conduct classroom and laboratory observations of teachers.

84. Analyze and assign priorities to program expenditures.

16. Work with state agencies in the development and operation of vocational education programs.

44. Locate community resources which will aid in program improvements.

78. Provide for mutual attainment of staff and organizational goals.

39. Cooperate with community organizations and agencies.

48. Prepare promotional materials to explain vocational education to the public.

28. Provide communication channels for the sharing of ideas and information among teachers.

82. Coordinate adult vocational education programs.

43. Effect fiscal operating controls over school expenditures.

27. Prepare reports for the higher administration.

15. Work with county and/or city agencies in developing and operating vocational education programs.

76. Assist teacher-coordinators in establishing and improving cooperative vocational education.

32. Conduct classroom and laboratory observations of teachers.

57. Work closely with the school board to maintain high quality vocational programs.

73. Articulate secondary and post-secondary vocational education program objectives.

34. Recommend persons for teaching positions.

60. Defend appropriations for vocational education from a philosophical base.

86. Coordinate the modification and rennovation of existing facilities.

8. Evaluate and recommend teachers for promotion, retention, and termination.

33. Interview teacher candidates.

47. Prepare communication releases for mass media.

49. Analyze student achievement patterns.

56. Report vocational education concerns to school board members.

9. Attend professional meetings.

26. Determine staff assignments.

64. Assume legal responsibility for planning and maintaining safe facilities.

23. Interpret vocational education legislation to other school administrators.

62. Critically examine points of view opposing your professional interests.

77. Represent teachers' interests to superiors within the school/district/county.

75. Participate in community, civic and volunteer activities.

55. Promote vocational education financing through participation at school board meetings.

2. Prepare administrative bulletins directed to the staff.

72. Synthesize current research information from sessions at professional conferences.

13. Provide assistance in writing proposals for state and federal funding of projects and programs.

83. Articulate vocational program offerings with those of CETA, OIC, and other training agencies.

35. Deal with disagreements among teachers.

17. Work with federal agencies in the development and operation of vocational education programs.

APPENDIX C

EXAMPLE OF HOW MODULES FOR A CBAE IN-SERVICE PROGRAM MIGHT BE SELECTED

Competency	Module Title	Module Source
5	Preparing for Curricular Change	VCS Project Washington State University
54	Preparing Local Plans for Administering Vocational Education	CBAE Project VPI & SU
81	Implementing Competency-Based Instruction in Vocational Education	CBAE Project VPI & SU
46	Planning Vocational Education Programs for the Disadvantaged and Handicapped	CBAE Project VPI & SU
19	Formulating Goals and Objectives for Vocational Education Programs	CBAE Project VPI & SU
10,11	Organizing and Conducting Staff Development Activities for Vocational Teachers	CBAE Project VPI & SU
20	Preparing for Curriculum Evaluation	VCS Project Washington State University
58	Motivating Vocational Education Personnel to Their Optimum Growth Potential	CBAE Project VPI & SU
30	Developing Curriculum: Goals, Objectives, and Instructional Plans	VCS Project Washington State University
74	Evaluate Your Vocational Program	PBTE Project Ohio State University
59	Establish and Maintain a Professional Philosophy of Education	PBTE Project Ohio State University
1	Help Formulate Policies Upon Which Vocational Programs Operate	Unavailable--develop locally
42	Prepare Fiscal Budgets Fiscal Management of Vocational Education Programs	VECS Project American Institute for Research

Competency	Module Title	Module Source
63	Provide for the Safety Needs of Vocational Students	PBTE Project Ohio State University